30419

On analytical expression of time dependence ... S/058/61/000/009/041/050
A001/A101

materials. They survey briefly and analyze critically the time dependence of viscous magnetization proposed earlier by other authors.

T. Nikitina

[Abstracter's note: Complete translation]

4

Card 2/2

SAMSONOVA, V.G., prof.; NOVITSKIY, R.I., dotsent; ADISMAN, M.A., inzh.; BIRYUKOV, K.A., person.pensioner soyuznogo znacheniya; LAVRENT'YEV, S.S., kand.fiziko-matematicheskikh nauk; TOLOKONSKIY, N.I., dotsent

Immortalize the memory of S.O.Maizel. Svetotekhnika 7 no.6:28-29 Je '61. (MIRA 14:6)

(Maizel', Sergei Osipovich)

LAVRENT'YEV, S.S. (Moskva)

Soviet physicists-teachers: Aleksei IAkovlevich Modestov.
Fiz. v shkole 21 no.1:26-27 Ja-F '61. (MIRA 14:9)
(Modestov, Aleksei Iakovlevich, 1873-1942)

24.2200,

S/058/62/000/008/093/134
A062/A101

AUTHORS: Remizov, A. N., Lavrent'yev, S. S.

TITLE: Dependence of the magnetic viscosity of ferromagnetic materials on the dimensions of the samples

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 60, abstract 8E433 ("Uch. zap. Mosk. gor. ped. in-ta im. V. P. Potemkina", 1960, 86, 43 - 75)

TEXT: The dependence of the prolonged (Ewing type) magnetic viscosity on the dimensions of the samples was measured by means of an astatic magnetometer in Armco-iron annealed at 800°C and slowly cooled. It was found that the magnetic viscosity increases with the relative length of the samples: the ratio of the viscous portion of magnetization to total magnetization increases, and the process of time variation of magnetization is slowed down. Thus it is necessary to distinguish the magnetic viscosity of the substance and the magnetic viscosity of the sample.

[Abstracter's note: Complete translation)

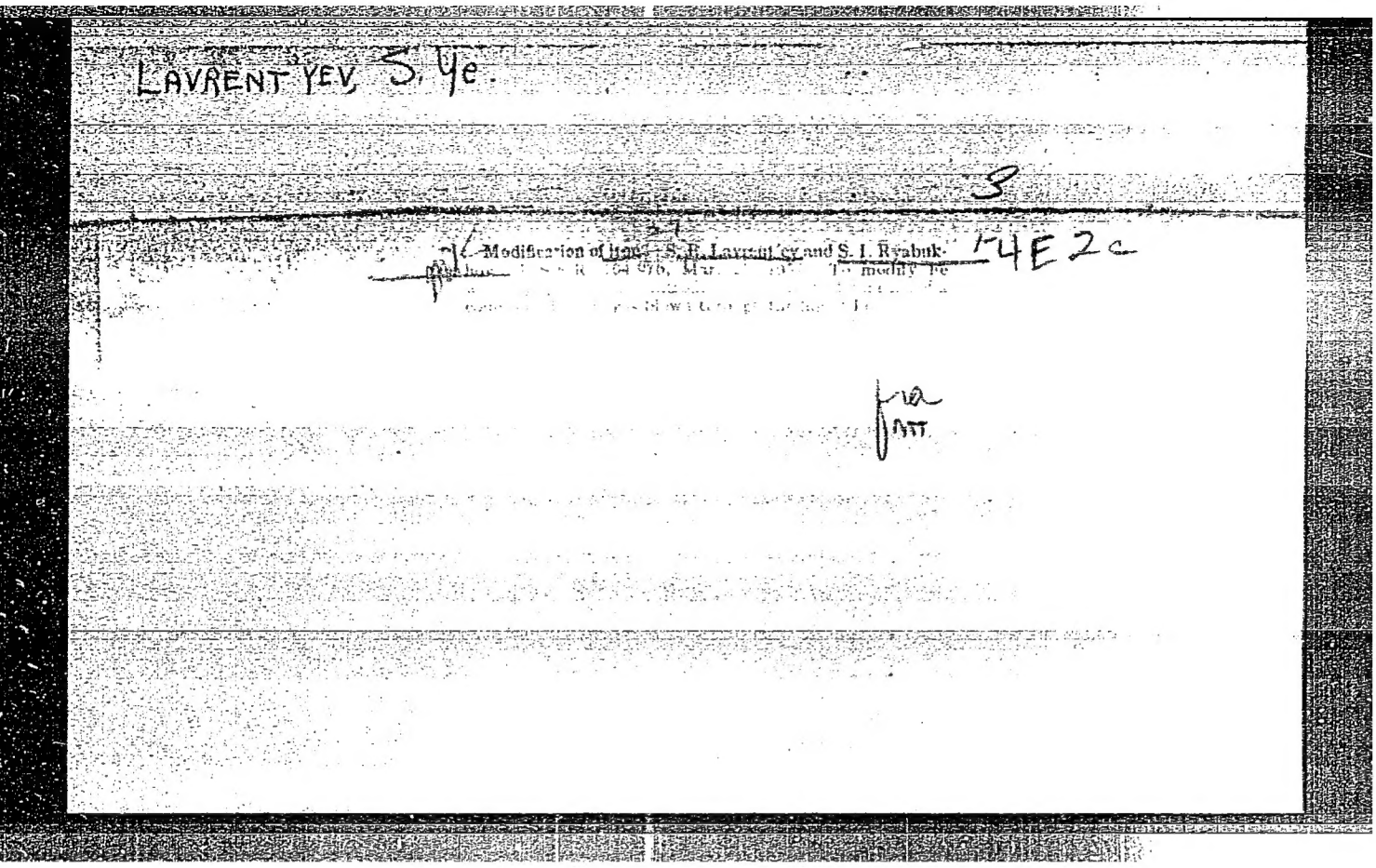
Card 1/1

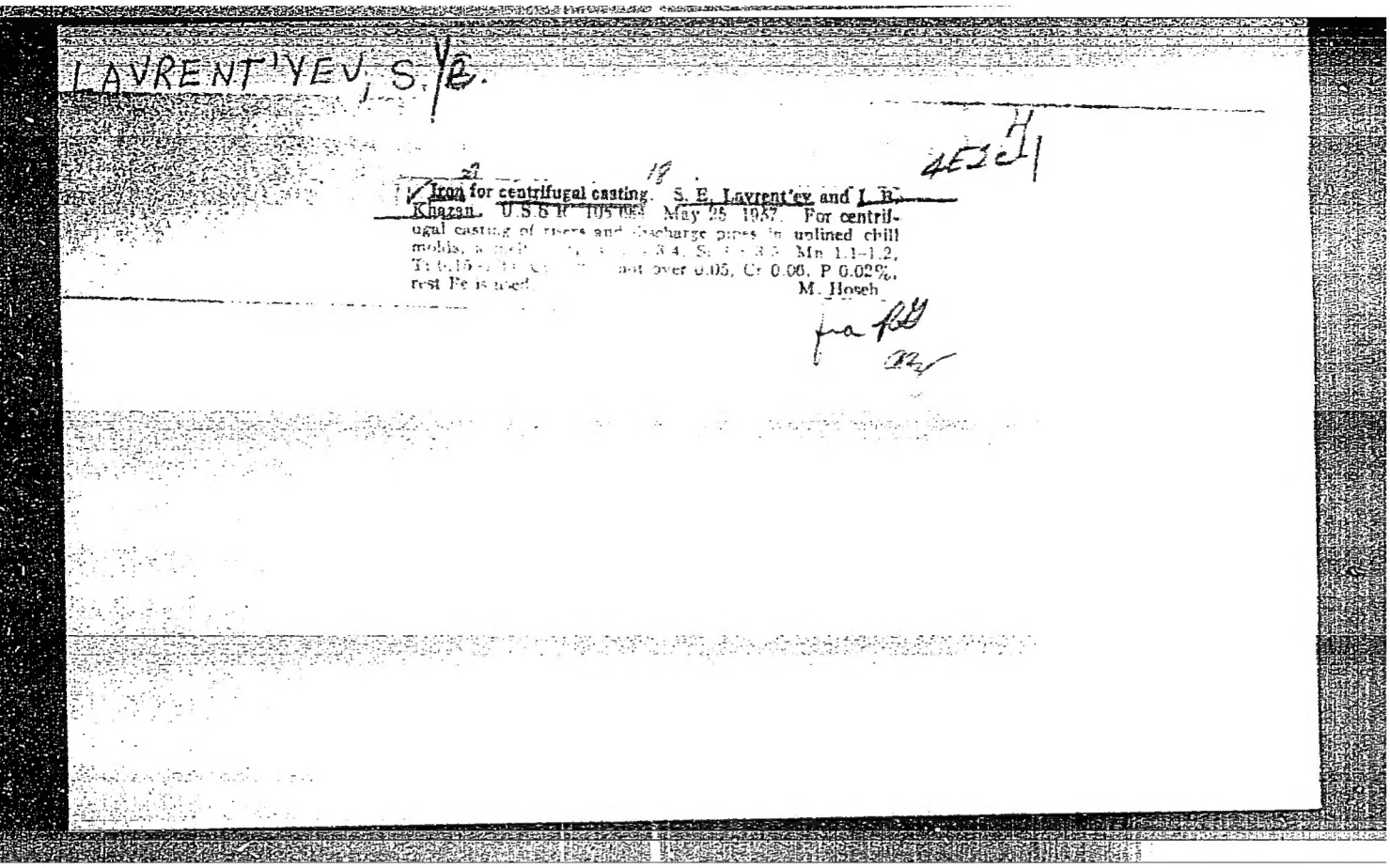
LAVRENT'EV, S. Ye

Automobile Industry and Trade

Innovations in founding at the Gor'kly Automobile Plant. Avt. trakt prom. No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.





LAVRENT'YEV, S. Ye.

Iron for centrifugal casting. S. E. Lavrent'ev and I. B. Khazan. U.S.S.R. 105 083 May 25 1957. For centrifugal casting of risers and discharge pipes in unlined chill molds, a [illegible] 3.4, Si [illegible] 3.5, Mn 1.1–1.2, Ti 0.15–[illegible] not over 0.05, Cr 0.00, P 0.02%, rest Fe is used.

M. Hoseh

IAVRENT'YEV, S.Ye.

Automatic machines should be used in founding shops.
Izobr.i rats. no.7:10-13 Jl '60. (MIRA 13:8)

1. Glavnyy spetsialist Gosudarstvennogo komiteta po avtomatizatsii i mashinostroyeniyu pri Sovete Ministrov SSSR.
(Foundries--Equipment and supplies)
(Machinery, Automatic)

ALEKSANDROV, N.N.; KLOCHNEV, N.I.; LAVRENT'YEV, S.Ye., inzh., retsenzent

[Technology of preparing and the properties of heat-resistant cast iron] Tekhnologiia polucheniia i svoistva zharostoikikh chugunov. Moskva, Izd-vo "Mashinostroenie," 1964. 169 p. (MIRA 17:5)

LAVRENT'YEV, V.

Give agriculture more high-quality machinery. Trakt. i sel'khozmash. 31 no.7:18-19 Jl '61. (MIRA 14:6)

1. Zamestitel' predsedatelya Rostovskogo Soveta narodnogo khozyaystva.

(Agricultural machinery)

KOROLEV, S., inzh.; LAVRENT'YEV, V., inzh.; ANAGORSKIY, L., red.; ROMANNIKOV, F., red.izd-va; KARZHAVINA, Ye., tekhn.red.

[Build-up welding of standard parts] Naplavka tipovykh detalei. Lipets, Lipetskoe knizhnoe izd-vo, 1962. 65 p. (MIRA 17:3)

1. Svarochnoye byuro Lipetskogo traktornogo zavoda (for Korolev, Lavrent'yev).

LAVRENT'YEV, V., inzh.- podpolkovnik

Use of electronic devices. Av. i Kosm. 47 no.12 [illegible]
(MIRA 18:1)

G/004/63/010/002/002/005
A051/A126

AUTHOR: LAVRENT'YEV, V. ~~Lawrentjew, W.~~, Doctor (Moscow)

TITLE: The external friction of rigid polymers

PERIODICAL: Plaste und Kautschuk, no. 2, 1963, 72 - 75

TEXT: A study is made of the friction properties of rigid polymers and of the general regularity of the outer friction. The friction law is investigated, followed by the relation between friction forces and gliding speed and temperature. Plastic polymers are studied only for their plastic properties and rubber polymers for their elastic properties. General experiments showed that: 1) the relation of the friction force of the plastic polymer to the normal load can be expressed by the linear law within a wide range, from 1 to 750 kp/cm^2. 2) The relation of the friction force to the gliding velocity for plastic and high-elastic polymers has two maxima. 3) As a rule, the friction force is elevated in plastics with an increase in temperature and drops for rubber and ebonite. 4) In gliding velocities of 10^{-5} to 100 mm/s, the nature of the

The external friction of .....

friction of the polymers in a high-elastic state is determined by molecular-kinetic processes, primarily by very strong plastic deformations of the contact surface, and by the nature of the friction of polymers in a plastic state. 5) The molecular-kinetic nature of the outer friction of the polymers is clearly seen at a gliding velocity of the polymers, comparable to the average relaxation velocity. There are 8 figures.

The author expresses his thanks to Professor Doctor W. Holzmüller, Leipzig, and Professor Doctor G. Bartenew, Moscow, for their assistance.

ASSOCIATION: Staatliches Pädagogisches Institut, "W. J. Lenin," Lehrstuhl für Festkörperphysik, Moscow (State Institute for Teachers, W. J. Lenin, Department of Solid State Physics, Moscow)

SUBMITTED: January 19, 1962

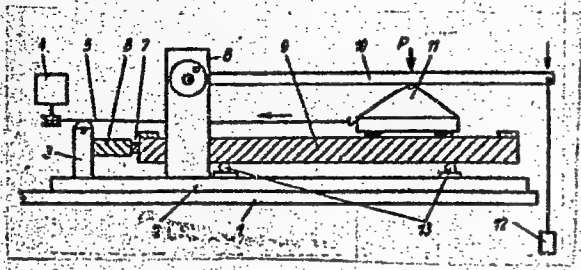


Figure 1: Diagram of the RTL tribometer. 1 - table; 2 - base surface; 3 - stand; 4 - motor with gear; 5 - threads; 6 - tensometric steel ring with resistance indicator; 7 - insulation; 8 - base surface of the lever; 9 - friction surface; 10 - lever; 11 - carriage with sample; 12 - load; 13 - rollers.

Card 3/3

ANTSYSHKIN, S.P.; BOBYLEV, G.V.; GORYACHEV, I.V.; ISACHENKO, Kh.M.; KOVALIN, D.T.; LAVRENT'YEV, V.A.; LITVINOV, I.V.; MUKIN, A.F.; PEREPECHIN, B.M.; PIS'MENNYY, N.H.; REBROVA, G.I.; SERGEYEV, P.A.; SOBINOV, A.M.; FEDOROV, P.F.; FILINOV, N.P.; KHRAMTSOV, N.N.; KAZAKOVA, Ye.D., red.; BALLOD, A.I., tekhn. red.

[Reference book for foresters] Spravochnik lesnichego. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1961. 894 p. (MIRA 14:7)
(Forests and forestry)

GOLOVANOV, G.A., gornyy inzh.; BERDICHEVSKIY, R.I., gornyy inzh.;
PTITSYN, Yu.V., gornyy inzh.; LAVRENT'YEV, V.A., gornyy tekhnik

Redesigning the Olenogorsk Ore Dressing Plant. Gor.zhur.
no.8:55-57 Ag '62. (MIRA 15:8)

1. Olenegorskiy gorno-obogatitel'nyy kombinat.
(Olenogorsk region—Ore dressing)

AUTHOR: Lavrent'yev, V.B. SOV/113-58-12-4/17

TITLE: A Method for Increasing the Roadability of Wheel Automobiles (Sposob povysheniya prokhodimosti kolesnykh avtomobiley)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 12, pp 13-15 (USSR)

ABSTRACT: The roadability of wheel automobiles is increased by using thin-walled tires of large profile with central regulation of the air pressure. The roadability of the automobiles ZIL-151, ZIL-157 and ZIL-121B is here compared. If the pressure in the tires 12,00 - 18 is reduced from 3.5 to 0.3 kg/cm^2, the supporting surface of the wheels increases sharply (Figure 1). The reduction of the specific pressure decreases the immersion of the wheels in the ground. At a pressure of 1 atm, the immersion in sand is only 50 mm (Figure 2). The resistance to the movement of the automobile on sand is lowest at a pressure of 0.75 atm. On snow, the minimum is at 1.5 atm (Figure 4). A reduction of the tire pressure from 3.5 to 0.75 atm lowers the resistance of the ground 9 times in the case of sand, and 3 times in swamps (Figure 5). The traction power of the automobile ZIL-151 at reduced tire pressure is 3,200 kg on meadows, 2,800 kg on sand, and 1,400 kg on snow. Further improvements may be

Card 1/2

A Method for Increasing the Roadability of Wheel Automobiles

reached by a further increase of the tire profile, by the use of differential gear blocking, etc (see Table).
There are 3 photos, 4 graphs, and 1 table.

ASSOCIATION: Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev)

LAVRENT'YEV, V.D.

Unutilized ways of economizing metal. Sel'khozmashina no.2:29-30 F '57. (MLRA 10:4)

(Metal industries)

LAVRENT'YEV, V.D., inzhener.

Raise the level of production organization at machinery plants.
Sel'khozmashina no.10:27-29 O '57. (MIRA 10:9)
(Machine industry)

LAVRENT'YEV, V.D., inzh.; FEL'DMAN, B.Z.

Technical innovations in agricultural machinery plants of the Rostov economic and administrative region. Trakt. i sel'khozmash no. 6:39-42 Je '58. (MIRA 11:7)

1. Rostovskiy na-Donu sovnarkhoz.
(Rostov Province--Agricultural machinery industry)

LAVRENT'YEV V.D.

AUTHOR: Kapitskiy, R.A., Engineer SOV-117-58-8-26/28

TITLE: All-Union Conference on Problems of Designing and Producing Agricultural Machines (Vsesoyuznaya konferentsiya po voprosam konstruirovaniya i proizvodstva sel'skokhozyaystvennykh mashin)

PERIODICAL: Mashinostroitel', 1958, Nr 8, p 46 (USSR)

ABSTRACT: The All-Union Scientific Technical Conference on problems of of designing and producing agricultural machines was convened in Rostov-on-Don in January 1958. The plenary session heard the report of Candidate of Technical Sciences A.Z. Zhuravlev, on the results of the execution of the resolutions made by the conference in 1953. Candidate of Technical Sciences Ya.M. Zhuk, VIM, read a paper on "The Results of the Study of the Two-Phase Method of Combine Harvesting in the USSR and of the Requirements of the System of Machines Needed for this Method". Candidate of Technical Sciences I.I. Trepenenkov, NATI, read on "The Methods for the Development of the Designing of Agricultural Tractors"; Doctor of Technical Sciences M.A. Pustygin, VISKhOM, on "The Principal Problems of the Development of Cereal Harvesting Combines"; Engineer V.D. Lavrent'yev on "Specialization and Cooperation in the Production of Agricultural Machines"; Engineer O.M. Kotovich, VISKhOM, on

Card 1/3

All-Union Conference on Problems of Designing and Producing Agricultural Machines

"Rational Profiles and Reduction of Assortment of Rolled Metal in Agricultural Machinebuilding"; Engineer G.M. Fedorishchenko on "Results of the Work of VNIIMESKh in the Field of the Electric Drive of Mobile Agricultural Machines"; Engineer P.V. Savich from the Institute of Machine Science of the UkrSSR Academy of Sciences on "The Determination of the Density of Soils by Means of Radioactive Isotopes"; Candidate of Technical Sciences S.A. Alferov, VISKhOM, on "The Design of Foreign Cereal Harvesting Combines"; Engineer A.I. Malitskiy on "New Designs of Corn-Harvesting Combines"; Candidate of Technical Sciences Ye.S. Bosoy on "Field Tests of Cutting Apparatus for an Ensilage Harvesting Combine"; the professor of the Khar'kov Polytechnical Institute A.I. Petrusov on "Methods for the Further Investigation of the Square-Pit Sowing Machine"; the lecturer of the Rostov Institute of Railroad Transport Engineers A.I. Zelenov on "A New Method for Cold Electric Welding for the Restitution of Rejected Details of Agricultural Machines"; the lecturer of the Novocherkassk Polytechnical Institute Ye.L. Lokshin on "Processing of Metals by Hydraulic

All-Union Conference on Problems of Designing and Producing Agricultural Machines

Blows of Ultrasound Frequency"; and the engineer of the Rostov Scientific Research Technological Institute D.M. Nabrodov on "New Methods of Casting in Agricultural Machine-Building". The conference recommended close cooperation between the designing bureaus, the scientific research organizations and the chairs of the various institutes for the development of new agricultural machines taking into consideration zonal differences. Special attention should be paid to the automation of the control of the various mechanisms.

1. Agricultural machines - Design 2. Agricultural machines - Production 3. Conferences - Agricultural machines - Rostov-on-Don

LAVRENT'YEV, V.

LAVRENT'EV, V.

Aviatsionnia kinos" emka. Moskva, Goskinoizdat, 1946. 153 p., illus.
Title tr.: Aerial filming.

TR810.L3

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

LAVRENT'YEV, Vladimir Ivanovich; KIRILLOV, N.I., doktor tekhnicheskikh nauk, professor, retsenzent; KRAVCHENKO, B.I., redaktor; TUBYANSKAYA, F.G., izdatel'skiy redaktor; ROZHIN, V.P., tekhnicheskiy redaktor.

[Processing of light-sensitive materials] Tekhnika obrabotki rulonnykh svetochuvstvitel'nykh materialov. Moskva, Gos.izd-vo obor. promyshl., 1957. 249 p. (MIRA 10:11)
(Photography--Developers and developing)

LAVRENT'YEV, V.

Apparatus for processing narrow-width moving-picture film. Sov. foto 17 no.12:55-59 D '57. (MIRA 11:1)
(Cinematography--Developing and developers)

23(

SOV/77-4-3-10/16

AUTHORS: Lavrent'yev, V.I. and Podval'nyy, S.P.

TITLE: The High-Speed Macro-Cinephotographing of Remote Objects

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1959, Vol 4, Nr 3, pp 222-225 (USSR)

ABSTRACT: The authors developed the scheme and designed and tested the model of an optical installation intended for the high-speed macro-cinephotography of remote objects (applicable to the cameras SKS-1 and FP-22). In addition the authors show the possibility to produce, with the aid of FP-22 cameras, macrophotos of a non-luminous object in reflected light with a frequency of 100,000 frames per second, on a scale up to 3:1. As to the latter, the authors' report is based on investigations carried out by Candidate of Technical Sciences, K.F.Romanov, of the Nauchno-issledovatel'skiy institut tekhnologii i organizatsii

Card 1/4

The High-Speed Macro-Cinephotographing of Remote Objects

proizvodstva (Scientific Research Institute of the Technology and Organization of Production). The authors used the scheme illustrated in diagram 1. The given scheme can be divided into two sections, the left for projection and the right for photographing, the back principal plane of lens 3 being at the interface between them. In the left section, objective 2 forms an inverted image of object 1 in the back principal plane 4 of lens 3, which in this way appears as a kind of transparent screen concentrating the rays on the camera objective. Lens 3 is characterized by the fact, that under given conditions it does not appear as an inverting system. The image formed by the camera objective, therefore, is erect. In this way a system with a very great equivalent focal distance has been obtained. Such a system is necessary for macrophotographs of comparatively remote ob-

The High-Speed Macro-Cinephotographing of Remote Objects

jects. Figure 2 (photograph) shows a model installation with camera SKS-1. Although the installation was not assembled from specially prepared parts, the sharpness of the obtained pictures was satisfactory. Figure 3 (on insert) shows a set of frames illustrating the burning out process of an electric bulb filament. The photographic frequency was 2,000 frames per second. It proved necessary to charge the system intended for industrial photographing in some cases (forming of shavings during the metal cutting process on a turning lathe), and the type of camera used (FP-22). Figure 4 (photograph) shows that this installation differs from the basic system by the use of a plane mirror which, at an angle of 90°, stands in the projectional section of the system. The camera is installed near the lathe at an angle of 90°. The minor projectional objective and the object are rigidly fixed on a common base, which can move along

The High-Speed Macro-Cinephotographing of Remote Objects

an axis, that passes through the centres of camera objective, lens and mirror. Figure 5 (on insert) shows a set of frames taken at a frequency of 100,000 pictures per second. Figure 6 (photograph) shows the illuminator, which consists of a lamp, a telescopic tube and a condensing lens. There are 5 sets of photographs and 1 diagram .

SUBMITTED: April 20, 1958

LAVRENT'IYEV, V.I.

In the world of high speeds. Sov. foto 19 no.5:46-51 My '59.
(MIRA 12:9)
(Photography, High-speed)

LAVRENT'YEV, V. I.

Isn't photography also a science and creative art? Sov.foto 19 no.7:33-34 Jl '59. (MIRA 12:11)
(Photography—Study and teaching)

LAVRENT'YEV, V.I.; PODVAL'NYY, S.[illegible]

Determining the optimum frequency of image motion in high-speed motion-picture photography. Zhur.nauch.i prikl.fot. i kin. 6 no.5:349-352 S-O '61. (MIRA 14:9)
(Motion-picture photography, High speed)

GERASIMOV, Yakov Ivanovich; KRESTOVNIKOV, Aleksandr Nikolayevich; SHAKHOV, Aleksey Sergeyevich; Prinimali uchastiye: LOMOV, A.L., assistent; LAVRENT'YEV, V.I., aspirant; KAMAYEVA, O.M., red. izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Chemical thermodynamics in nonferrous metallurgy]Khimicheskaia termodinamika v tsvetnoi metallurgii; spravochnoe rukovodstvo. Moskva, Metallurgizdat. Vol.3.[Thermodynamics of tungsten, molybdenum, titanium zirconium, niobium, tantalum and their most important compounds]Termodinamika volframa, molibdena, titana, tsirkoniia, niobiia, tantala i ikh vazhneishikh soedinenii. 1963. 283 p. (MIRA 16:2)
(Nonferrous metals—Thermodynamic properties)

LAVRENT'YEV,V.I.; PELL', V.G.; FOMIN, A.A., red.; PANKRATOVA, M.A., tekhn. red.

[High-speed motion-picture photography with the SKS-1 camera] Skorostnaia kinos"emka kameroi SKS-1. Moskva, Izd-vo "Iskusstvo," 1963. 221 p. (MIRA 16:10)
(Motion-picture photography, High-speed)
(Motion-picture cameras)

BUTOMO, D.G.; LAVRENT'YEV, V.I.

Laboratory of the "Krasnyi vyberzhets" Plant. Zav.lab.21 no.12: 1403-1409 '55. (MLRA 9:4)
(Alloys) (Metallurgical laboratories)

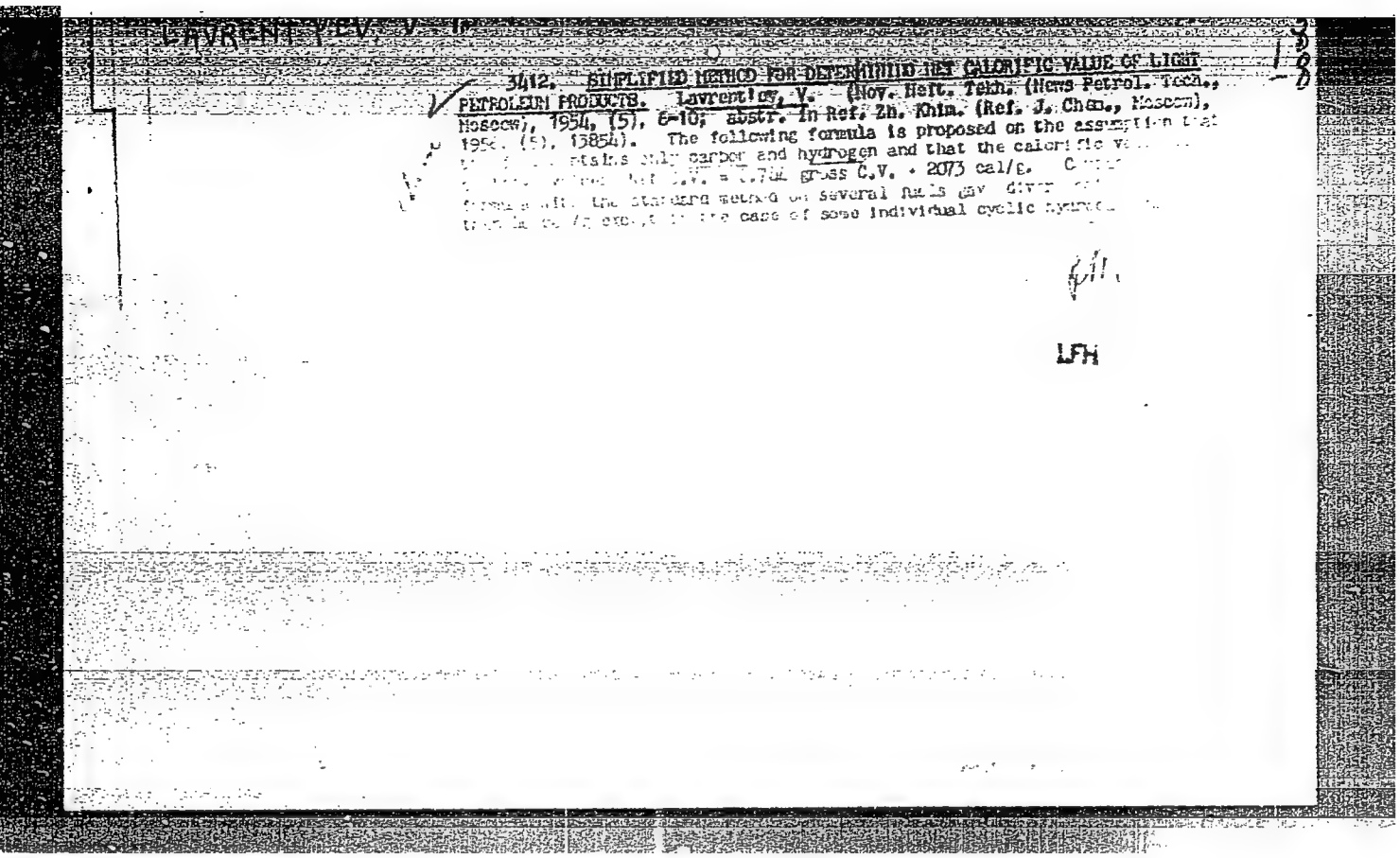
LAVRENTYEV V.I.

3

4E 32

4479. DETERMINATION OF NET CALORIFIC VALUE OF FUELS FROM THEIR PHYSICO-CHEMICAL PROPERTIES. Lavrentiev, V.I. (Nov. Neft. Tekh., Neftepererab. (News Petrol. Tech., Treatment, Moscow), 1956, (4), 16-21; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (7), 24295). Net calorific value was calculated for four fuels and 20 samples of individual hydrocarbons and mixtures of them. Formulae by Kragoe, Rotberg, and two by the author were used. None of them is always applicable, but they can be used for particular types of petroleum products or petroleum fuels produced by similar processes from similar crudes. The best formula for fuels containing 30% or

particular types of petroleum products or petroleum fuels produced by similar processes from similar crudes. The best formula for fuels containing 30% or more aromatics is the author's formula which makes net calorific value equal to $7.5\,T_A - 2865.\,n^{20}D + 11080$, where T_A is the aniline point.



LAVRENT'YEV, V. N.

3412. SIMPLIFIED METHOD FOR DETERMINING NET CALORIFIC VALUE OF LIGHT PETROLEUM PRODUCTS. Lavrent'yev, V. N. (Nov. Nefti. Tekh. (News Petrol. Tech., Moscow), 1954, (5), 6-10; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1954, (5), 13854). The following formula is proposed on the assumption that [illegible] contains only carbon and hydrogen and that the calorific va[illegible] Net C.V. = 0.7[illegible] gross C.V. + 2073 cal/g. C[illegible] agreement with the standard method on several fuels gav[illegible] in the case of some individual cyclic hydroc[illegible]

LFH

LAVRENT'YEV, V. I.

СИНТЕЗ И СВОЙСТВА НАФТЕНОВЫХ УГЛЕВОДОРОДОВ
С ДЛИННОЙ БОКОВОЙ ЦЕПЬЮ

А. С. Дорогочинский, В. И. Лаврентьев, А. В. Лютер,
И. П. Мельников, В. А. Рубцов

VIII Mendeleyev Congress for General and Applied Chemistry
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1959

abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 19 March 1959.

86146

S/152/60/000/003/002/003
B023/B060

53610 2209, 1375, 1153

AUTHORS: Dorogochinskiy, A. Z., Nakhapetyan, L. A., Lavrent'yev, V.I., Boykova, Ye. P., Kost, A. N., Yershov, V. V.

TITLE: Antioxidizing Properties of Some Pyrazoline Derivatives

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, 1960, No. 3, pp. 69-71

TEXT: In the authors' opinion, the stability of motor fuels to oxidation is a most important problem. They therefore studied the antioxidizing properties of some pyrazoline derivatives in their capacity as inhibitors. The authors first obtained numerous pyrazolines having no substituents in position 1, and then such having different substituents in this position. The following compounds were synthesized as possible inhibitors: 1-carbamido-3-phenyl pyrazoline, 1-phenyl carbamido-3-phenyl-4-ethyl-pyrazoline, 1-thiocarbamido-3,5,5-trimethyl pyrazoline, 1-phenyl thio-carbamido-3,5,5-trimethyl pyrazoline, 1-phenyl thiocarbamido-3-methyl-5,5-pentamethylene pyrazoline, 1-phenyl thiocarbamido-3,5-diphenyl pyrazoline, 1,3,5-triphenyl pyrazoline, 3-amino-1-phenyl pyrazoline.

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Antioxidizing Properties of Some Pyrazoline Derivatives

S/152/60/000/003/002/003
B023/B060

Derivatives of phenyl thiocarbamides of various pyrazolines were obtained by the action of phenyl isothiocyanate upon these pyrazolines (Ref. 5). In a similar manner, the following compounds were obtained from the corresponding pyrazolines: 1-carbamido-3-phenyl pyrazoline and 1-phenyl carbamido-3-phenyl-4-ethyl pyrazoline (Ref. 2). 3-amino-1-phenyl pyrazoline was synthesized from acrylonitrile and phenyl hydrazine (Ref. 6). 1,3,5-triphenyl pyrazoline was obtained by interaction of benzal acetophenone and phenyl hydrazine (Ref. 7). The efficiency of the preparations examined was estimated by comparing their inhibiting effect with the effect of para-oxy diphenyl amine, which was taken as a standard, as well as with the effect of 2,6-ditertiary butyl-4-methyl phenol. Two samples of motor fuels A and B were taken, the properties of which are given in Table 1. Sample A was prepared by intermixing equal amounts of fresh distillate of thermocracking and of the benzene-ligroin fraction. Sample B was prepared by intermixing the same amounts in a ratio of 30 : 70. Both samples were inhibited by various additions on the day of their preparation. The additions were allowed to dissolve in the motor fuels by being added as benzene solutions. Benzene was taken in an amount of ~ 0.1% of the fuel volume. The effect of stability of samples A and B

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Antioxidizing Properties of Some Pyrazoline Derivatives

S/152/60/000/003/002/003
B023/B060

was examined first. For this purpose the authors studied the inhibited motor fuel for its stability to oxidation by determining the induction period on the basis of ГОСТ 4039-48 (GOST 4039-48) within 6 h. The content of potential resins in the motor fuel was determined next. Results show that some pyrazoline derivative samples have a considerable inhibiting effect. The best results were yielded by the use of 1-phenyl thio-carbamido-3,5,5-trimethyl pyrazoline. In the sample inhibited with this substance, the resin formation appeared only after two months, while resins in a noninhibited sample increased with uninterrupted intensity throughout the whole storage time. There are 3 tables and 7 references: 5 Soviet, 1 US, and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov) GrozNII (Groznyy Petroleum Institute)

SUBMITTED: September 3, 1959

Card 3/3

26196
S/081/61/000/012/023/028
B103/B202

11.1210

AUTHORS: Lavrent'yev, V. I., Bayburskiy, L. A., Dronin, A. P., Denezhkina, Ye. A.

TITLE: Production of fuels for gas and turbine engines from products obtained in Groznyy

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1961, 525, abstract 12M172. (Tr. Groznensk. neft. n.-i. in-t, 1960, vyp. 7, 73-85)

TEXT: The authors studied the following distillation and residual products of direct distillation and of secondary origin in order to obtain gas-turbine fuels: kerosene gas oil fractions of the Achalukskiy, Ozek-Suatskiy and Turkmenskiy petroleum, mazout of the Anastasiyevskiy petroleum, kerosene of thermal cracking, cracking residue, contact-coking distillate of pitch of petroleums containing sulfur. It was found possible to obtain gas-turbine fuels with satisfactory values of viscosity, solidification point, and vanadium content from the products of Groznyy. The following products were recommended for examination on

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26196
S/081/61/000/012/023/028
B103/B202

Production of fuels for gas and turbine ...

field plants (naturnyye ustanovki): mazout of the Anastasiyevskiy petroleum and its mixtures with the kerosene gas oil fractions of Achalukskiy (80 : 20), Ozek-Suyatskiy (85-15), and Turkmenskiy (80 : 20) petroleum, mixture of the Groznyy cracking residue with sulfur-containing cracking kerosene (75 : 25) and the distillate of contact coking of asphalt from which gasoline had been removed and to which 1.5% of Groznyy cracking residue had been added in order to lower the solidification point. [Abstracter's note: Complete translation.]

Card 2/2

Synthesis and Properties of Naphthenic Hydrocarbons With a Long Side Chain

68998
S/020/60/131/02/045/071
B011/B011

were transformed to 70%. A concentrate boiling between 120 and 185° was obtained from the polymerizate (yield 85-90%). Table 1 shows the resulting (mostly ramified) structures of isodecenes. Table 2 shows their physico-chemical properties (the raw material was fraction 6 of the thermal cracking and benzene). Isomerization and hydro-dehydro polymerization of the olefins were ascertained as side reactions. 2nd stage: alkylation. Aromatic hydrocarbons (benzene, toluene) were alkylated by means of the isodecenes produced (Refs 3-5). The best conditions were: 97% H_2SO_4, reaction time 2 hours, ratio benzene:isodecene = 5:1. Temperature 10-20°. The alkylate amounted to 140% by weight of olefins or 90% of the theoretical yield. A fraction boiling between 180° and 350° was obtained from the alkylate as a concentrate of isodecyl benzenes (85% of the alkylate). It chiefly consisted of mono-substituted derivatives of benzene (Table 2). On using aluminum chloride as catalyst the yield was higher and attained 97-98%. Disproportionation occurred as side reaction. 3rd stage: hydrogenation. The alkylate concentrate was hydrogenated on 2 catalysts: a) nickel catalyst. The optimum conditions were: pressure 7 atm, molar ratio hydrogen:alkylate = 2.8:1; 150-200°.

Card 2/4

68999

Synthesis and Properties of Naphthenic Hydrocarbons With a Long Side Chain

S/020/60/131/02/045/071
B011/B011

ASSOCIATION: Groznenskiy neftyanoy nauchno-issledovatel'skiy institut (Groznyy Scientific Research Institute of Petroleum)

PRESENTED: November 28, 1959, by B. A. Kazanskiy, Academician

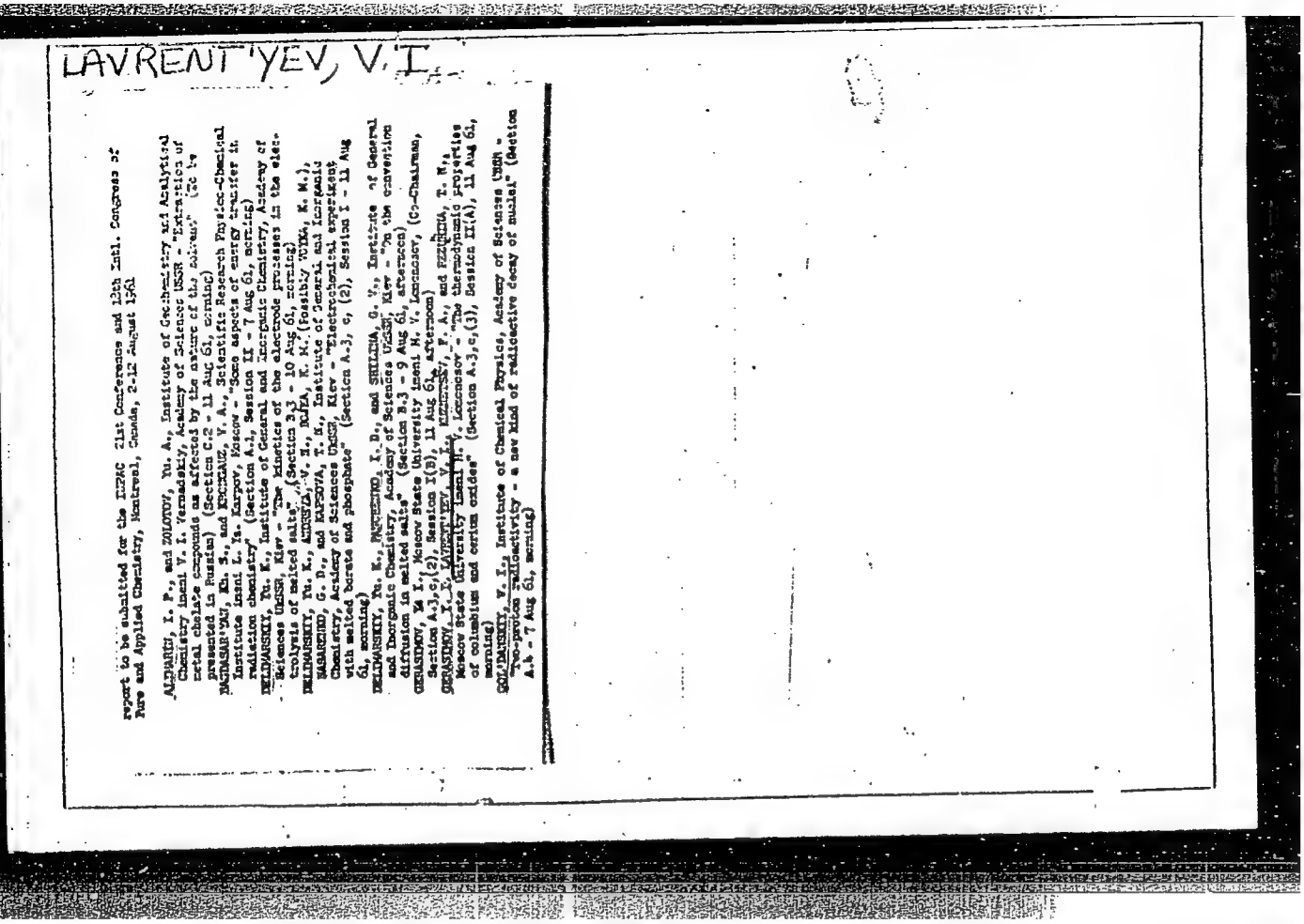
SUBMITTED: November 25, 1959

Card 4/4

LAVRENT'YEV, V.I.; GERASIMOV, Ya.I.; RESUKHINA, T.N.

Equilibrium with hydrogen and thermodynamic characteristics of $BaMoO_4$ and $BaMoO_3$. Dokl.AN SSSR 133 no.2:374-376 Jl '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
2. Chlen-korrespondent AN SSSR (for Gerasimov).
(Barium molybdate)



LAVRENT'YEV, V.I.

report to be submitted for the IUPAC 21st Conference and 13th Intl. Congress of Pure and Applied Chemistry, Montreal, Canada, 2-12 August 1961

ALIMARIN, I. P., and ZOLOTOV, Yu. A., Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "Extraction of metal chelate compounds as affected by the nature of the solvent." (to be presented in Russian) (Section C:2 - 11 Aug 61, morning)

BAGNASAR'YAN, Kh. S., and ZHUKHOVITSKIY, V. A., Scientific Research Physico-Chemical Institute imeni L. Ya. Karpov, Moscow - "Some aspects of energy transfer in radiation chemistry" (Section A.1, Session II - 7 Aug 61, morning)

BELYAVSKIY, Yu. K., Institute of General and Inorganic Chemistry, Academy of Sciences UkSSR, Kiev - "The kinetics of the electrode processes in the electrolysis of melted salts" (Section 3:3 - 10 Aug 61, morning)

BELYAVSKIY, Yu. K., ANISIMOVA, V. N., SOKOLA, K. K. (Possibly VOIKA, K. K.), BASAREVSKIY, G. D., and KAPUSTINA, T. K., Institute of General and Inorganic Chemistry, Academy of Sciences UkSSR, Kiev - "Electrochemical experiment with melted borate and phosphate" (Section A.3, c, (2), Session I - 11 Aug 61, morning)

BELYAVSKIY, Yu. K., MATVEYEV, I. D., and SHILINA, G. V., Institute of General and Inorganic Chemistry, Academy of Sciences UkSSR, Kiev - "On the conversion diffusion in melted salts" (Section B.3 - 9 Aug 61, afternoon)

GRIGOROV, M. I., Moscow State University imeni M. V. Lomonosov, (Co-Chairman, Section A.3,c,(2), Session I(B), 11 Aug 61, afternoon)

GRIGOROV, I. K., LAVRENT'YEV, V. I., MIKHEYEV, F. A., and SHIKINA, T. N., Moscow State University imeni M. V. Lomonosov - "The thermodynamic properties of columbium and cerium oxides" (Section A.3,c,(3), Session II(A), 11 Aug 61, morning)

GOL'DANSKIY, V. I., Institute of Chemical Physics, Academy of Sciences USSR - "Two-proton radioactivity - a new kind of radioactive decay of nuclei" (Section A.4 - 7 Aug 61, morning)

GERASIMOV, Yakov Ivanovich; KRESTOVNIKOV, Aleksandr Nikolayevich; SHAKHOV, Aleksey Sergeyevich. Prinimali uchastiye: DUDAREVA, A.G., assistent; LOMOV, A.L., assistent; FEYGINA, Ye.I., assistent; VYGODSKIY, I.A., inzh.; KUZNETSOV, F.A., aspirant; LAVRENT'YEV, V.I., aspirant; CHERNOV, A.N., red.; KAMAYEVA, O.M., red. izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Chemical thermodynamics in nonferrous metallurgy] Khimicheskaia termodinamika v tsvetnoi metallurgii. Moskva, Gos. nauchno-tekhn. izdvo lit-ry po chernoi i tsvetnoi metallurgii. Vol.2. [Thermodynamics of copper, lead, tin, silver and their most important compounds; a handbook] Termodinamika medi, svintsa, olova, serebra i ikh vazhneishikh soedinenii; spravochnoe rukovodstvo. 1961. 262 p.
(MIRA 14:11)

(Nonferrous metals—Thermal properties)
(Chemistry, Metallurgic)

LAVRENT'YEV, V. I., CAND CHEM SCI, "THERMODYNAMIC ~~INVESTIGATION~~ study OF NIOBIUM TETROXIDE." MOSCOW, 1961. (INSTITUTE OF GENERAL AND INORGANIC CHEM IMENI N. S. KURNAKOV, ACAD SCI USSR). (KL-DV, 11-61, 211).

REZUKHINA, T.N.; LAVRENT'YEV, V.I.; LEVITSKIY, V.A.; KUZNETSOV, F.A.

Determination of the thermodynamic functions of oxygen-containing salts by the electromotive force method. Zhur.fiz. khim. 35 no.6:1367-1369 Je '61. (MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Salts) (Electromotive force)

20642

S/020/61/136/006/018/024
B101/B203

54700 1043, 1273, 1087

AUTHORS: Lavrent'yev, V. I., Gerasimov, Ya. I., Corresponding Member AS USSR, and Rezukhina, T. N.

TITLE: Thermodynamic characteristics of niobium oxides (equilibrium with hydrogen, and electrochemical measurements)

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 6, 1961, 1372-1375

TEXT: As published data concerning the reduction of niobium oxides are insufficient, and the equilibrium of low niobium oxides with hydrogen has not yet beeen studied at all, the authors report on the reduction of Nb_2O_5 in equilibrium with H_2 to NbO, as well as on the measurement of emf of a galvanic cell of NbO and metallic niobium. The equilibrium of niobium oxides with hydrogen between 1200 and 1550°C was studied in a circulation apparatus described in Ref. 8. The samples were placed in a molybdenum furnace on a platinum base in such a manner that they touched the Pt in a few places only, and were reduced in a hydrogen flow. The total composition of the reaction products was determined from the

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Thermodynamic characteristics of niobium...

increase in weight of the sample on annealing in air, the phase composition by means of X-rays. Two stages of reduction of Nb_2O_5 were ascertained: $2.5NbO_{2.4}+H_2 \rightarrow 2.5NbO_2+H_2O$ (I), and $NbO_2+H_2 \rightarrow NbO+H_2O$ (II). Fig. 1 shows the logarithms of the equilibrium constant $K_p = P_{H_2O}/P_{H_2}$ as a function of composition. Between $NbO_{2.4}$ and $NbO_{2.5}$, K_p changes so quickly that it could not be measured accurately. For the polytherms of the equilibrium constant of the two stages, the authors found the equations: $\log K_{p_I} = -15050/4.575T+1.3306$ (1480-1673°K); $\log K_{p_{II}} = -29490/4.575T+1.3334$ (1673-1823°K), and obtained therefrom: $\Delta G^o_I(cal) = 15050-6.087T$; $\Delta G^o_{II}(cal) = 29490-6.10T$. By combination of reactions I and II with $H_2+(0.5)O \rightarrow H_2O_{gas}$ (III), and with the use of J. Chipman's data (Ref. 9) and the specific heat for NbO_2 and NbO (Ref. 10) as well as for O_2 (Ref. 11), they found for the reaction

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B101/B203

Thermodynamic characteristics of niobium...

$2NbO_2+0.5O_2 \longrightarrow Nb_2O_5$ (VI): $\Delta G^o_{VI} = -65.5$ kcal; $\Delta H^o_{VI} = -70.25$ kcal; $\Delta S^o_{VI} = -15.91$ entropy units (referred to 298.2°K). It was not possible to conduct the reduction to the metal under equilibrium conditions. Therefore, the thermodynamic functions of NbO were determined by measuring the emf E of the cells Pt|Fe,$Fe_{0.95}O$|solid electrolyte|NbO,Nb|Pt (A), and Pt|Fe_3O_4,$Fe_{0.95}O$|solid electrolyte|$Fe_{0.95}O$,Fe|Pt (B) between 841 and 1073°C. Mixed crystals of the system ThO_2 - La_2O_3 were used as solid electrolyte. Values in good agreement with published data were obtained for cell B. For cell A, results are given in Fig. 3. The maximum error does not exceed 1.2%. For the reaction $Fe_{0.95}O+Nb \longrightarrow 0.95Fe+NbO$ (VII), the authors calculated: $\Delta G^o_{VII} = -34500+3.15T$; for the reaction $Nb+0.5O_2 \longrightarrow NbO$ (VIII): $\Delta G^o_{VIII} = -92.36$ kcal; $\Delta H^o_{VIII} = -98.39$ kcal; $\Delta S^o_{VIII} = -20.19$ entr.un. By combination of the reactions $NbO+0.5O_2 \longrightarrow NbO_2$ (V), as well as VI and VIII, they calculated for

Card 3/4

Thermodynamic characteristics of niobium...

$2Nb+(5/2)O_2 \rightarrow Nb_2O_5$ (IX): (at 298.2°K) $\Delta H^o_{IX} = -456.9$ kcal; $\Delta G^o_{IX} = -424.9$ kcal; $\Delta S^o_{IX} = -107.43$ e.u., and for the reaction $Nb+O_2 \rightarrow NbO_2$ (X): $\Delta H^o_X = -193.3$ kcal; $\Delta G^o_X = -179.7$ kcal; $\Delta S^o_X = -45.76$ entr.units. There are 3 figures, 2 tables, and 23 references: 8 Soviet-bloc and 10 non-Soviet-bloc.

SUBMITTED: November 30, 1960

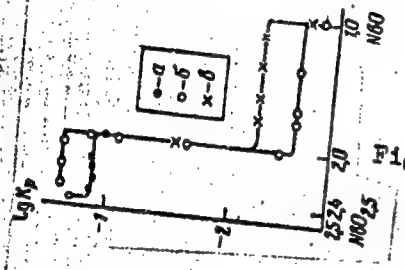

Fig. 1

Fig. 3

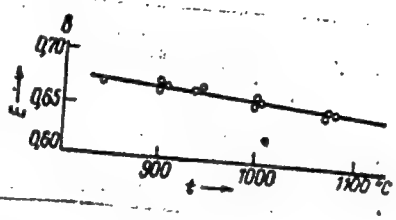

Fig. 3

Card 4/4

LAVRENT'YEV, V.I. Prinimali uchastiye: POL'SHINSKIY, V.V., starshiy nauchnyy sotrudnik; AKOPOVA, A.A., starshiy nauchnyy sotrudnik; SHAYKHUTDINOVA, L.K.; inzh.; SHAGEYEVA, L.A.; inzh.; TUMANOVA, A.M., preparator; STAROSTIN, P.A., inzh.; BALAKHONOV, A.P., motorist; ARTEM'YEV, V.G., motorist.

Using the heavy residual fractions of Tatar sour crude as a fuel for gas turbines. Nefreper. i neftekhim. no.4:27-34 '63 (MIRA 17:7)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut.

21 Oct 51

USSR/Aeronautics - Wave Resistance (Ships)

"Influence of the Boundary Layer on the Wave Resistance of a Ship," V. M. Lavrent'yev, Cen Sci Res Inst of Mar Fleet, Min of Mar Fleet

"Dok Ak Nauk SSSR" Vol LXXX, No 6, pp 857-860

Exptl tests of the linear theory of wave resistance of ships in a heavy ideal liquid show that this theory generally is satisfactory for sufficiently sharp forms of the outlines after exclusion of the

217T47

region of gravitation numbers (Froude's numbers) corresponding to interference prominences and depressions on the resistance curves. Math study of influence of ship shape and boundary layer's shape on resistance. Submitted 20 Jul 51 by Acad A. I. Nekrasov.

217T47

LAVRENT'YEV, V. M.

~~USSR/Engineering - Cavitation, Supercavitating Screw Propeller~~ 1951

LAVRENT'YEV, V. M.

"On the Work of the Ideal Supercavitating Screw Propeller," L. A. Epshteyn (Moscow)

Inzhen Sbor, Vol 9, pp 19-26

Gives critical review of following: "On the Theory of the Ideal Cavitating Propeller," A. M. Basin, DAN SSSR, 1945, Vol 49, p 570, and "Theory of the Ideal Cavitating Propeller," V. M. Lavrent'yev, DAN SSSR, 1945, Vol 50, p 89. Discusses certain questions on theory of ideal supercavitating screw propeller. Submitted 17 Jun 50.

257T51

LAVRENT'EV, V. M.

Sudovye dvizhiteli. Dop. v kachestve uchebn. posobiia dlia sudomekhanicheskikh i sudostroit. fakul't. vyssh. uchebn. zavedenii morskogo flota. Leningrad, Morskoi transport, 1949. 275 p. diagrs.

Ship propellers.

DLC. VM751,L39

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

BIAGOVESHCHENSKIY, S.N.; LAVRENT'YEV, V.M., red.; FLAUM, M.Ya., tekhn. red.

[Standardising the stability of seagoing vessels] O normirovanii ustoichivosti morskikh sudov. Moskva, Izd-vo "Morskoi transport," 1951. 155 p. (Leningrad. TSentral'nyi nauchno-issledovatel'skii institut morskogo flota. Trudy, no.8). (MIRA 11:5)
(Stability of ships)

KOPEYETSKIY, Valentin Vasil'yevich; LAVRENT'YEV, V.M., otvetstvennyy redaktor; ALEKSEYEVA, M.N., redaktor; KOMOLOVA, V.M., tekhnicheskiy redaktor

[Hydrodynamics of a screw propeller in a tube of circular cross section] Gidrodinamika vinta v trube krugovogo secheniia. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1956. 139 p. (MLRA 10:1)
(Propellers)

LAVRENT'YEV, V.M., kand.tekhn.nauk

Standardizing tugboat stability on jerking of the towing cable. (MIRA 11:8)
Trudy TSNIIMF no.15:3-21 '58.
(Stability of ships) (Tugboats)

IGNAT'YEV, Mikhail Aleksandrovich; LAVRENT'YEV, V.M., otv.red.; DROZHZHINA, L.P., tekhn.red.

[Diagrams for propeller design for ice-breaking vessels] Diagrammy dlia rascheta grebnykh vintov ledokolov i ledokol'nykh sudov. Leningrad, Izd-vo "Morskoi transport," 1959. 23 p. (MIRA 13:9)

(Propellers)

LAVRENT'YEV, V.M., kand.tekhn.nauk

General theory of a marine hydraulic propeller. Trudy TSNIIMF 7 no.35:3-39 '61. (MIRA 14:12)
(Propellers)

LAVRENT'YEV, V.M., doktor tekhn. nauk

Strength requirements of the propellers of seagoing vessels.
Trudy TSNIIMF no.66:98-106 '65. (MIRA 18:12)

L 23944-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(l) IJP(c) JD/HW

ACC NR: AP6009821 SOURCE CODE: UR/0413/66/000/004/0011/0011

AUTHOR: Sukhorukov, N. A.; Lavrent'yev, V. M.; Khvostik, V. P.

ORG: none

TITLE: A tool for stamping pipes. Class 7, No. 178779

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 11

TOPIC TAGS: die, metal stamping, pipe, metal pressing

ABSTRACT: This Author's Certificate introduces a tool for stamping pipes. The unit contains a die with a punch in the center. A stamping cycle is completed on one double stroke of the press. There is a hollow section in the leading end of the die which accommodates a catch on the punch. This catch is used for moving the punch and for cutting off the stamping waste. A section of this catch is turned down on a lathe for picking up the stamping waste on the punch to extract it from the container. The punch can be moved in the die so that there is a gap between the lower end of the tail section of the punch and the end of the hollow in the die where the punch is located. This makes it possible to shift the punch in the axial direction with respect to the die on the reverse stroke of the press so that a device for removing the stamping waste may enter the press between the catch on the punch and the die.

SUB CODE: 13/ SUBM DATE: 05Nov62/ ORIG REF: 000/ OTH REF: 000

UDC: 621.774.381.7 :
621.774.38.073

Card 1/1

L 23951-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(l) IJP(c) JD/HW

ACC NR: AP6009820 SOURCE CODE: UR/0413/66/000/004/0011/0011

AUTHOR: Sukhorukov, N. A.; Lavrent'yev, V. M.; Khvostik, V. P.

ORG: none

TITLE: A method for stamping pipes. Class 7, No. 178778

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 11

TOPIC TAGS: pipe, metal stamping, metal pressing

ABSTRACT: This Author's Certificate introduces a method for stamping pipes on presses with a single container. The length of the stamping cycle is reduced by using a punch to remove the waste from the pipe at the end of the working stroke of the press. The waste is extracted from the container and cleaned from the punch on the reverse stroke.

SUB CODE: 13/ SUBM DATE: 05Nov62/ ORIG REF: 000/ OTH REF: 000

UDC: 621.774.381.7 : 621.774.38.073

Card 1/1

L 45606-66 EWT(m)/EWP(w)/EWP(v)/T-2/EWP(k) IJP(c) EM

ACC NR: AT6014312 (N) SOURCE CODE: UR/2752/63/000/049/0003/0035

60
B+/

AUTHOR: Lavrent'yev, V. M. (Candidate of technical sciences)

ORG: None

TITLE: Theory of a propeller with a large number of blades (plane problem)

24

SOURCE: Leningrad. Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota. Trudy, no. 49, 1963. Gidromekhanika sudna (Hydromechanics of ships), 3-35

TOPIC TAGS: propeller blade, fluid mechanics, vortex flow, ship, PLANE FLOW

ABSTRACT: The author reviews the literature on vertical-axis (cycloidal) propellers and considers the plane problem of a propeller with an infinitely large number of blades under light loading. Under these conditions, the velocity field generated by the operation of the propeller outside its slipstream is equivalent to the field of vortex-sink combinations distributed around the circumference of the wheel. The velocity field inside the stream is derived from the first field by addition of a certain plane-parallel flow. Both the law for the distribution of vortex-sink combinations and the given plane-parallel flow are simply connected with the distribution of circulation around the perimeter of the wheel. Formulas are given for calculating the inductive velocity and inductive bevel of the flow at the blades and also for the forces which arise at the blades assuming a given distribution of circulation around

Card 1/2

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ACC NR: AT6014312

the perimeter. The variational problem of optimum distribution of circulation is considered where inductive losses are reduced to a minimum. It was found that optimum distribution of circulation takes place when the circulation densities $\chi(\theta)$ at symmetric points of the leading and trailing semicircles differ from one another by a constant value which is equivalent to uniform distribution of the induced velocity at infinity across the slip stream. A comparison of the optimum distribution with the simplest type of sinusoidal distribution (induced velocity at infinity distributed across the slipstream in an ellipse) shows that the inductive efficiencies at small loads differ only slightly. It is found that the torque of the propeller is completely determined in the general case by the coefficient of the first term in the expansion of $\chi(\theta)$ in a Fourier series, while the efficiency is determined only by the asymmetric part of the function $\chi(\theta)$. The symmetric part of this function affects only the transverse force (drift force). Formulas are derived for forces and moments and also for the necessary angles of attack for the blades assuming a given distribution of circulation. It is assumed in the calculations that the length of the cord of the blade is small in comparison with the shortest radius of curvature for its cycloidal trajectory. Orig. art. has: 6 figures, 145 formulas.

SUB CODE: 20/ SUBM DATE: None/ ORIG REF: 009/ OTH REF: 007

Card 2/2

L 6[illegible]3-67

ACC NR: AT6025570 (N) SOURCE CODE: UR/2752/66/000/072/0003/0031

21
B+1

AUTHOR: Lavrent'yev, V. M. (Doctor of technical sciences)

ORG: None *

TITLE: Jerking sway of a ship under cable towing

SOURCE: Leningrad. * Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota. Trudy, no. 72, 1966. Gidromekhanika sudna (Hydromechanics of ships), 3-31

TOPIC TAGS: shipbuilding engineering, motion equation, , connecting cable, ship

ABSTRACT: The author studies the problem of determining the heeling of a towed ship under instantaneous tension of the tow cable at an arbitrary angle to the diametric plane. It is assumed that the boat travels under its own power up to the jerk with respect to a weakened cable whose weight and elasticity are not considered. Jerking is assumed to consist of two stages: inelastic impact and post-slamming motion during which time the ship undergoes maximum heeling. A system of differential motion equations is derived for the post-slamming period and solved by numerical methods. It is assumed that if post-slam heeling rates are known, then rough estimates can be made as to maximum heeling of the ship. The linearization results of the system of equations for post-slamming motion at any jerking angle which is not very small can be

UDC: 629.12:532

Card 1/2

L 05658-67

ACC NR: AT6025570

estimated only after model testing. Model testing is being conducted at the present time to determine values for position force factors and resistance moments. The determination of these factors along with jerking sway data could be used for numerical integration of the derived equations. Orig. art. has: 2 figures, 136 formulas.

SUB CODE: 13/ SUBM DATE: None/ ORIG REF: 009/ OTH REF: 001

LAVRENT'YEV, V.N.

Automatic line for finishing panels. Der.prom. 5 no.11:20-21 N '56. (MLRA 10:1)

1. Leningradskaya mebel'naya fabrika no.3.
(Woodworking machinery) (Automatic control)

LAVRENT'EV, V. N.

24274 LAVRENT'EV. V. N. Anatomiya arteriy diafragmal'nogo nerva cheloveka. Trudy Leningr. San.-gigien. Med. IN-TA, T. III, 1949, S. 98-112.- Bibliogr: 17 Nazv.

SO: Letopis, No. 32, 1949.

LAVRENT'YEV, V.N.

LAVRENT'YEV, V.N., assistent

Original capillary lymph networks and lymph vessels of the scalp. Trudy LSGMI 9:15-34 '51. (MIRA 11:1)

1. Kafedra normal'noy anatomii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AMN SSSR prof. Zhdanov D.A.)
(SCALP) (LYMPHATICS)

LAVRENT'YEV, Vladimir Nikolayevich; LAZAREVICH, L., red.; DANILINA, A., tekhn.red.

[Building state farms during the first years of the Soviet regime; 1917-1920] Stroitel'stvo sovkhozov v pervye gody Sovetskoi vlasti; 1917-1920. Moskva, Gos. izd-vo polit.lit-ry, 1957. 119 p. (MIRA 11:4)
(State farms)

BADIR'YAN, G.G., prof.; VASIL'YEV, N.V., prof.; KOTOV, G.G., prof.; RUDAKOVA, Ye.A., prof.; BRAGINSKIY, B.I., doktor ekon.nauk; GUMEROV, M.N., dots.; ROMANCHENKO, A.V., doktor ekon. nauk; ABRAMOV, V.A., dots.; ALTAYSKIY, I.P., kand. ekon. nauk; GAVRILOV, V.I., dots.; RAFIKOV, M.M., kand.ekon. nauk; VINOKUR, R.D., dots.; RUSAKOV, G.K., dots.; LAVRENT'YEV, V.N., dots.; GORELIK, L.Ya., red.; PONOMAREVA, A.A., tekhn. red.

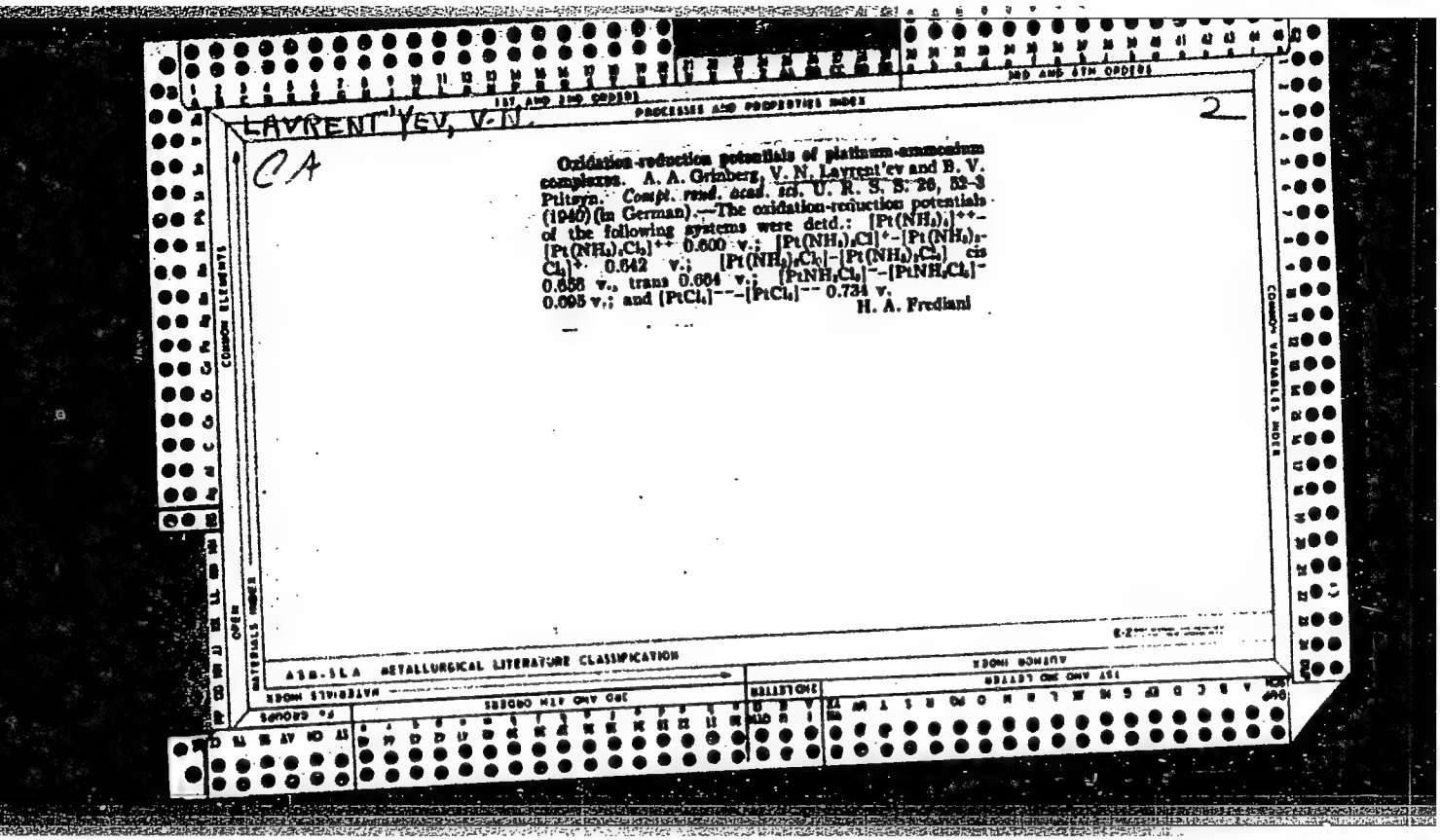
[Economics, organization and planning of agricultural production] Ekonomika, organizatsiia i planirovanie sel'skokhoziaistvennogo proizvodstva. Moskva, Ekonomizdat, 1963. 607 p. (MIRA 16:11)

(Agriculture--Economic aspects)

LAVRENT'YEV, V. N.

The oxidation-reduction potentials of the compounds of the platinum metals. I. Oxidation-reduction potentials of the system $[Pt\ X_4] + 2X^- \rightleftarrows [Pt\ X_6]^{--} + 2\ e.$ A. A. Grinberg, B. V. Ptitsyn and V. N. Lavrent'ev. J. Phys. Chem. (U.S.S.R.) 10, 661-76 (1937). The oxidation-reduction potential of this system varies very strongly with the nature of the coordinating X- ion. With respect to the H_2-Pt electrode, in 0.01 N solns. of the two Pt salts and 1 N NaX, the E_o values at 25° and the heat effects (from temp. coeff.) for various X-ions are: Cl-, 0.758v., and 37.2 Cal.; Br-, 0.643 v.; I-, 0.3925 v.; SCN-, 0.468 v. These different values are attributed to the different stabilities of the complex ions. $K_2\ PtBr_6$ was prepd. by the action of an excess of hot KBr soln. on $K_2\ PtCl_6$ in presence of Br_2 water, and then cooling. $K_2\ PtBr_4$ was obtained by reduction of K_2PtBr_6 with the calcd. amt. of $K_2C_2O_4$ in presence of Pt black and final recrystn. from EtOH. K_2PtI_6 was prepd. by boiling K_2PtCl_6 with excess KI. K_2PtI_4 was obtained by slightly warming K_2PtCl_4 in an excess of 1 N KI. $K_2Pt(SCN)_6$ and $K_2Pt(SCN)_4$ were both prepd. by the action of warm 1 N KSCN on K_2PtCl_6 and K_2PtCl_4, resp. F. H. Rathmann

The system CaO-Al_2O_3-Fe_2O_3. Bonaventura Tavasci. Ann. chim. applicata 27, 505-18 (1937).- The system CaO-Al_2O_3-Fe_2O_3 was studied by Hansen, Brownmiller and Bogue (C. A. 22, 1523) who limited themselves to the zone high in CaO. In extending the study T. restudied the binary systems involved (C. A. 30, 8058[6]; 31, 8147[2]). The presence of a ternary compd. $4CaO.Al_2O_3,Fe_2O_3$ was confirmed. It is completely miscible with $2CaO,Fe_2O_3$. A constituent which was thought to be $3CaO.2Fe_2O_3$ was found to be a mixt. of $2CaO,Fe_2O_3$ and CaO,Fe_2O_3 confirming Sosman and Merwin (C. A. 10,2673). A compd. $CaO,Al_2O_3,2Fe_2O_3$ was identified, whose characteristic property is its complete miscibility with $CaO,2Fe_2O_3$. When heated above 1400°, it decomps., ferrous compds. being among the products formed. A. W. Contieri



LAVRENT'YEV, V.N.

CA

2

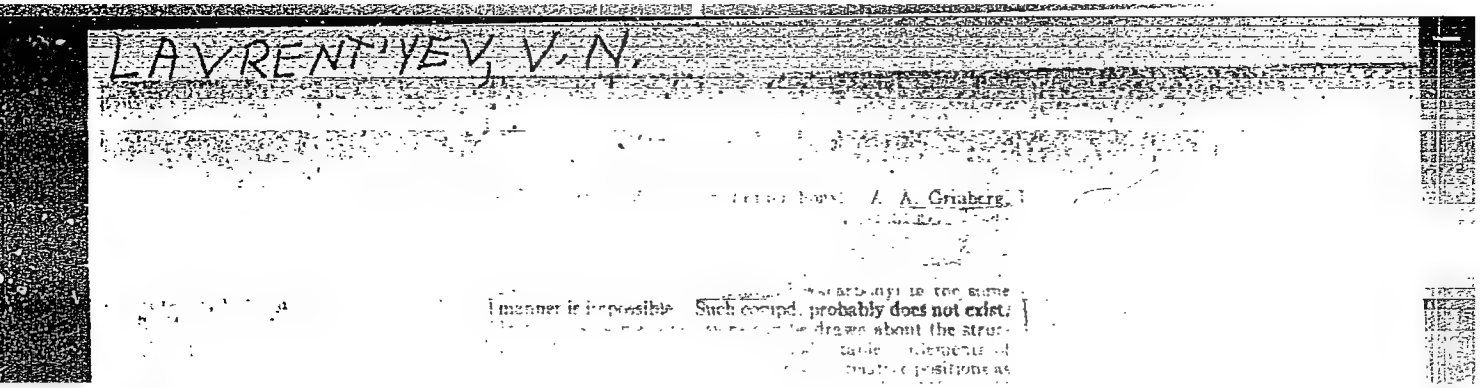
Oxidation-reduction potentials of platinum-ammonium complexes. A. A. Grinberg, V. N. Lavrent'ev and B. V. Pitteya. *Compt. rend. acad. sci. U. R. S. S.* 26, 52–3 (1940) (in German).—The oxidation-reduction potentials of the following systems were detd.: $[Pt(NH_3)_4]^{++}$–$[Pt(NH_3)_2Cl_2]^{++}$ 0.600 v.; $[Pt(NH_3)_3Cl]^{+}$–$[Pt(NH_3)_2Cl_2]^{+}$ 0.642 v.; $[Pt(NH_3)_2Cl_2]$–$[Pt(NH_3)_2Cl_2]$ cis 0.658 v., trans 0.604 v.; $[PtNH_3Cl_3]^{-}$–$[PtNH_3Cl_3]^{-}$ 0.695 v.; and $[PtCl_4]^{--}$–$[PtCl_4]^{--}$ 0.734 v.

H. A. Frediani

LAVRENT'YEV, V. N.

"Redox Potentials of the Platinum Complexes Including Organic Amines and Glycocoll," Dokl. AN SSSR, 35, No.7, 1942.

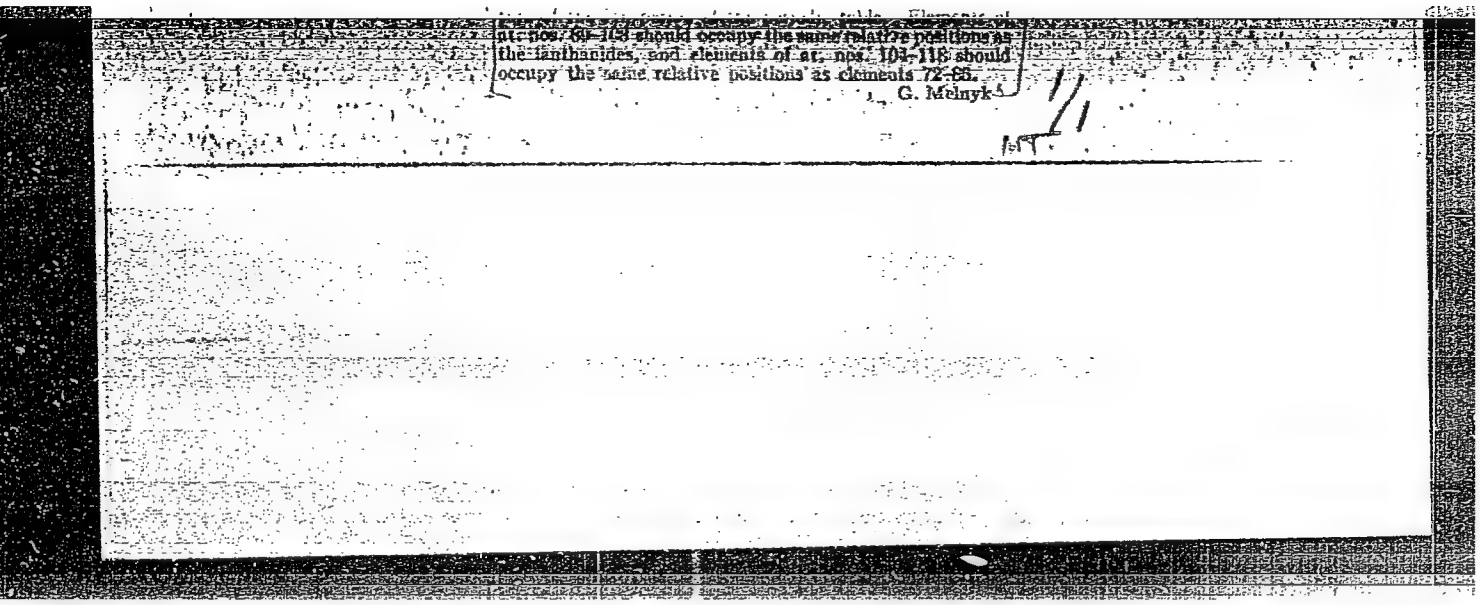
Chem. Lab., Pavlov Med. Inst.; Inst. Gen. and Inorgan. Chem., AS USSR



LAVRENT'YEV, V. N.

A. A. Grinberg,

manner is impossible. Such compd. probably does not exist;
drawn about the stru-
positions as



at. nos. 68-103 should occupy the same relative positions as the lanthanides, and elements of at. nos. 104-118 should occupy the same relative positions as elements 72-86.

G. Melnyk

S/137/62/000/003/128/191
A052/A101

AUTHOR: Lavrent'yev, V. N.

TITLE: The effect of the residual austenite on the wear resistance of steel surfaces strengthened by case hardening

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 37, abstract 3I227 ("Sb. nauchn. rabot. Mosk. in-t nar. kh-va," no. 20, 1961, 106-112)

TEXT: The study of the effect of the residual austenite on the wear resistance of a case hardened layer was carried out on steels 20, 30, ХГТ (KhGT), 12Х2Н4А (12Kh2N4A) and 18ХГТ (18KhGT). Different amounts of residual austenite were received after case hardening the samples at 950°C during 5 hours 30 minutes with a subsequent hardening. The hardening at 875, 820 and 775°C was carried out with a cooling down after case hardening, at 950°C - directly from the cementation case and at 1,050°C - after heating up from the case hardening temperature. The samples hardened under these conditions were tempered at 200°C during 1,5 hours. The microstructure of the case hardened layer at hardening at 1,050°C consisted of isolated sections of coarse-grain residual austenite and large martensite needles. A decrease of the case hardening temperature to 875°C

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A052/A101

The effect of the residual austenite ...

reduces the amount of residual austenite. At the hardening from the cooling down temperature of 820°C a structure consisting of a fine needle-shaped martensite, a small amount of the residual austenite and of globular carbides in the form of small inclusions was obtained. A considerable increase in the amount of residual austenite obtained at hardening at high temperatures leads to a decrease of the wear resistance of the case hardened layer. The most wear resistant is a case hardened layer with a structure consisting of martensite, fine-dispersed carbides and 20 - 30% of residual austenite in the form of fine grains. An increase in the amount of residual austenite over 30% reduces the wear resistance of the case hardened layer, and its decrease has a favorable effect on the wear resistance.

A. Babayeva

[Abstracter's note: Complete translation]

Card 2/2

LAVRENT'YEV, V. P.

LAVRENT'YEV, V. P. "Investigation of the Wear Resistance of Steel Surfaces Strengthened by Cementation, Cyanation, and Tempering with High-Frequency Currents." Min Trade USSR. Moscow Inst of National Economy imeni G. V. Plekhanov. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya Letopis', No. 19, 1956.

S/123/61/000/022/001/024
A004/A101

AUTHOR: Lavrent'yev, V.P.

TITLE: Effect of carbon concentration on the resistance to wear of steel surfaces hardened by cementation

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 22, 1961, 13, abstract 22A96 ("Sb. nauchn. rabot. Mosk. in-t nar. kh-va", 1961, no. 17, 177 - 184)

TEXT: The author investigated the resistance to wear of the cemented steel grades 18ХГТ (18KhGT), 30 ХГТ (30KhGT), 12Х2Н4А (12Kh2N4A) and 20 used for gears and other machine parts, depending on the carbon concentration in the surface layer and on the alloying with carbide-forming elements. The tests were carried out on the МИ(MI) friction machine with specimens 40 mm in diameter and 10 mm wide, the load on the specimens being 75 kg. It was found that the wear resistance of cemented steel rises when the C-concentration in the surface layer is increased up to 1 - 1.2%; at C >1.2% the wear resistance increases only insignificantly. The resistance to wear depends also on the degree

Card 1/2

Effect of carbon concentration ...

of alloying of the layer. The surface of the 12Kh2N4A grade steel possesses a higher wear resistance than that of the steel grades 18KhGT, 30KhGT and 20.

V. Kolesnik

[Abstracter's note: Complete translation]

Card 2/2

S/123/62/000/010/005/013
A004/A101

AUTHOR: Lavrent'yev, V.P.

TITLE: The effect of residual austenite on the wear resistance of steel surfaces hardened by cementation

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 10, 1962, 34, abstract 10B194. ("Sb. nauchn. rabot. Mosk. in-t nar. kh-va", 1961, no. 20, 106 - 112)

TEXT: The investigations were carried out with specimens made of the steel grades 18 ХГТ (18KhGT), 30 ХГТ (30KhGT), 12 Х2 Н4А (12Kh2N4A) and grade 20 steel. After cementation at 950°C for 5.5 hours, the specimens were hardened at 1,050, 950, 875, 820 and 775°C with subsequent tempering at 200°C for 1.5 hours. The amount of residual austenite in the surface layer was determined by an X-ray diffraction phase analysis, while the resistance to wear was determined by dry rolling friction with 10% sliding. It is shown that, depending on the hardening temperature, the amount of residual austenite in the surface layer varies in the same steel grade over a wide range. In the 18KhGT grade steel the amount of re-

Card 1/2

S/123/62/000/010/005/013
A004/A101

The effect of residual.....

sidual austenite in the surface layer changes from 65% at a hardening temperature of 1,050°C to 25% when hardening takes place at 1,320°C, while the hardness changes correspondingly from HRC (?) to 60 [Abstracter's note: Obviously, the first magnitude is missing]. With such a reduction in residual austenite the resistance to wear increases. However, with a further reduction in residual austenite the resistance to wear decreases. This regularity can also be observed with the 30KhGT grade steel. The wear resistance of the grade 20 steel increased by up to 15% when the residual austenite was reduced in the cemented layer. With the 12Kh2N4A grade steel the wear resistance of the cemented layer increased considerably if the amount of residual austenite is reduced from 85 to 55%. A further reduction in residual austenite down to 15% results in an insignificant increase in wear resistance. It is pointed out that the cemented layer shows a maximum wear resistance if its structure is composed of martensite, finely dispersed carbides and 20 - 30% residual austenite in the form of fine grains. If the residual austenite content exceeds 30% the resistance to wear decreases. Less than 30% residual austenite in the form of uniformly distributed inclusions affect the wear resistance of the cemented layer in a favorable way. There are 2 figures.

[Abstracter's note: Complete translation]

E. Spivak

Card 2/2

LAVRENT'YEV, V.V.

Category : USSR/Atomic and Molecular Physics - Physics of high-molecular substance D-9

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 1018

Author : Ratner, S.B., Lavrent'yev, V.V.
Title : Comparison of Friction and Electric Conductivity of Rubber.

Orig Pub : Zh. tekhn fiziki, 1956, 26, No 4, 853-856

Abstract : Data are compared on the variation of the coefficient of friction electric conductivity, strength, and parmeation to gas, all as functions of the amount of filler in the rubber, and the ideas developed by S.B. Ratner (Dokl. AN SSSR, 1953, 93, No 1), concerning the nature of friction, are checked. The authors cirticize the views of Schallamach, (Schallamach, A., Proceedings of the Royal Society, 1953, B66, 386) on the nature of friction of rubber, showing that experimental data are satisfactorily described by the following equation for the coefficient of friction: $\mu = \mu_\infty + Ap^{-h}$, where p is the specific load and h the hardness of the rubber; μ_∞ is the part of the friction coefficient independent of the load, and A is a constant.

Card : 1/1

LAVRENT'YEV, V.V.

Category : USSR/Atomic and Molecular Physics - Physics of High-Molecular Substances. D-9

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6455

Author : Ratner, S.B., Lavrent'yev, V.V.
Title : Proof of Existence of Static Friction in Rubber Without Lubrication

Orig Pub : Dokl. AN SSSR, 1956, 108, No 3, 461-464

Abstract : In the analysis of the formulae of Tobol'skiy and others for the dry friction of rubber

$$V = B \cdot \nu_0 (-E/RT) \sinh(\alpha F/RT)$$

where V is the speed of the specimen, F the drawing force (equal to the friction force), α and B are constants, and RT has the usual meaning, G.M. Bartenev (Dokl. AN SSSR, 1954, 96, No 6; 1955, 103, No 6) concluded that V = 0 only if F = 0, i.e., rubber has no static friction. An experimental setup is described, in which it is possible to employ the pendulum tribometer (Ratner, S.B. et al, Zavod, laboratoriya, 1954, No 7) to detect the presence of static friction.

Card : 1/2

LAVRENTYEV, V. V., and RATNER, S. B.

"Static Friction of Rubber," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Rubber Research Inst.

B-3,084,395

LAVRENT'YEV, V.V.

External friction of rubber. Koll.zhur. 19 no.4:522-523 Jl-Ag '57.
(MIRA 10:10)

1.Moskovskiy gorodskoy pedagogicheskiy institut im. V.P. Potemkina, Kafedra teoreticheskoy fiziki.
(Rubber)

LAVRENT'YEV, V.V.

20-4-23/60

AUTHOR: Lavrent'yev, V. V.

TITLE: An Experimental Study of the Law of the Friction of Rubber Within a Wide Interval of Normal Pressures (Eksperimental'noye issledovaniye zakona treniya reziny v shirokom intervale normal'nykh davleniy).

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 4, pp. 717-720 (USSR)

ABSTRACT: At first the most important results of some earlier papers are given. The theory by G.M.Bartenev for the friction of rubber on firm smooth surfaces furnishes the following dependence of the frictional force on the factual contact-surface and on the normal load: $F = CS^{\Phi} + C_1 \omega P$. In this connection C and C_1 signify constants dependent on rubbing speed, temperature and on the molecular constants. ω takes into consideration the influence of the normal factual pressure p_{Φ} on the amount u of the energy barrier. S^{Φ} is the factual contact-surface and P is the normal load. According to Thirion the frictional force in big loads is practically independent on the normal pressure and consequently $\omega \simeq 0$ may be put in the above-mentioned formula. In this case $F = CS^{\Phi} = CS^{H}_{V}$ is obtained. The simple boundary conditions given here are satisfied by the interpolation formula $F = CS^{H}(\gamma_0 + \alpha p)/(1+\alpha p)$. In this connection

Card 1/3

20-4-23/60

An Experimental Study of the Law of the Friction of Rubber Within a Wide Interval of Normal Pressures.

ASSOCIATION: Moscow City Pedagogical Institute imeni V. P. Potemkin (Moskovskiy gorodskoy pedagogicheskiy institut imeni V. P. Potemkina).

PRESENTED: February 26, 1957, by P. A. Rebinder, Academician.

SUBMITTED: February 23, 1957.

AVAILABLE: Library of Congress

Card 3/3

LAVRENT'YEV, V.V.

20-4-23/60

AUTHOR: Lavrent'yev, V. V.

TITLE: An Experimental Study of the Law of the Friction of Rubber Within a Wide Interval of Normal Pressures (Eksperimental'noye issledovaniye zakona treniya reziny v shirokom intervale normal'nykh davleniy).

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An Experimental Study of the Law of the Friction of Rubber Within a Wide Interval of Normal Pressures. 20-4-23/60

$p=P/S^H$ and $\gamma_0 = S_0^\phi/S^H$ apply. S_0^ϕ is the surface of the contact at $p \to \infty$. From the above-given interpolation formula the formula $1/\mu = (1+\alpha p)/C(\alpha+\gamma_0/p)$ is obtained for the reciprocal value of the coefficient of friction μ. In order to be able to evaluate the various results of relevant earlier papers, the friction of rubber on smooth hard surfaces at normal loads of 1-200 kg/cm^2 has to be investigated. The method is based on the measurement of the force of the initial displacement according to an assumed duration of contact. The experimental data found are illustrated by a diagram. In small loads the Coulomb law and in big loads the Thirion formula are applicable. The formula by Ratner is not applicable to the friction of rubber. But the formula by Bartenev is applicable in the entire range of loads investigated here.
There are 4 figures, 1 table and 8 references, 4 of which are Slavic.

Card 2/3

An Experimental Study of the Law of the Friction of Rubber Within a Wide Interval of Normal Pressures. 20-4-23/60

ASSOCIATION: Moscow City Pedagogical Institute imeni V. P. Potemkin (Moskovskiy gorodskoy pedagogicheskiy institut imeni V. P. Potemkina).

PRESENTED: February 26, 1957, by P. A. Rebinder, Academician.

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Card 3/3